

## ***UT Oil and Gas Rules Paraphrased***

***Minimal attention is given here to the permitting process for those seeking an AO; see R307-401***

### **EMISSION INVENTORIES**

- R307-150-3(5) Sources in SIC 13 with uncontrolled actual emissions of 1tpy of any single of the following, must conduct emissions inventories: PM10, PM2.5, NOX, SOX, SO, or VOC
- R307-150-9 Emissions inventories must be submitted electronically every 3 years, starting with CY2017, including totals for PM10, PM2.5, NOX, SOX, SO, and VOC, and list any control equipment used

### **APPROVAL ORDER**

- R307-401-3 Applies to any construction, installation, modification or relocation which will or might reasonably be expected to become a source or an indirect source of air pollution, including projects where equipment is installed for emissions control. Exemptions are found in R307 parts 401-9 through 12 and parts 401-14 through 16.
- R307-401-5 If a project is not exempt, a notice of intent must be submitted and approved before construction, modification or relocation. The process of review, public notice and final approval are found in R307 parts 401-6, 7 and 8, respectively.
- R307-401-10(5) Oil and Gas industry sources registered according to R307-505 do not need an AO

### **GENERAL PROVISIONS**

- R307-501-4(1)(a) All processing and handling equipment shall be designed and operated to minimize VOC emissions as reasonably practicable
- R307-501-4(1)(b) Control equipment shall be maintained and operated consistent with good air pollution control practices for minimizing emissions
- R307-501-4(2)(a) Control equipment shall be operated and maintained according to manufacturer specifications and good engineering and maintenance practices
- R307-501-4(2)(b) Control equipment manufacturer specifications or equivalent shall be kept on file
- R307-501-4(2)(c) Control equipment must be adequately designed and sized to achieve the control efficiency rates established in rules or in AOs, and to handle reasonably foreseeable fluctuations of VOC emissions during normal operations

### **PNEUMATIC CONTROLLERS**

- R307-502-4 Continuous bleed natural gas-driven pneumatic controllers as described in 40 CFR 60.5365(d)(1), must follow the requirements of 40 CFR 60.5390
- R307-502-5(1) Pneumatic controllers existing before December 1, 2015 need not record the month and year for the tagging requirements of 40 CFR 60.5390(b)(2) and (c)(2)
- R307-502-5(2) Pneumatic controllers existing before December 1, 2015 are not required to keep record of the date of installation or manufacturer specifications

### **FLARES**

- R307-503-4 Flares shall be equipped with an operational auto-igniter
- R307-503-5 Record of the installation date and the manufacturer specifications for the auto-igniter shall be kept

### **TRUCK LOADING**

- R307-504-4(1) Truck loading must be conducted using bottom filling or submerged fill pipe
- R307-504-3(2) and 504-4(2) If the source does not have an AO, is subject to R307-506 and is required to control storage vessel emissions, then a vapor capture line is required, effective on 1/1/2018 for new sources on or thereafter, and effective 7/1/2019 for sources existing before 1/1/2018

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**PERMIT BY RULE - Rules R307-505 through R307-510 apply to sources in SIC 13 that do not have an AO**

**OIL & GAS INDUSTRY REGISTRATION**

- R307-505-2 All sources in SIC 13 must register with DAQ unless they have an AO
- R307-505-3(1) New sources from 1/1/2018 forward have 30 days to register
- R307-505-3(2) Sources existing before 1/1/2018 have until 7/1/2018 to register
- R307-505-3(3) Registrations must be updated within 30 days if there is a company name change, removal or addition of controls, or termination of operations

**STORAGE VESSELS**

- R307-506-4(1) Thief hatches must be closed and latched
- R307-506-4(2) VOCs from storage vessels must be recycled, recovered or controlled if the source produces 8000 bbls or more crude oil or 2000 bbls or more condensate on a rolling 12 month cycle, unless demonstration shows that that the combined uncontrolled emissions are less than 4 tons VOC on a rolling 12-month cycle
- R307-506-4(2)(a) If VOCs are sent to a control device, the device must be compliant with R307-508
- R307-506-4(2)(b)(i) Calculation to demonstrate that combined vessel emissions are less than 4 tons must be done using a methodology based on AP-42 Chapter 7
- R307-506-4(3) Any VOC controls required by the above shall remain in place for a minimum of one year
- R307-506-4(4) Emergency storage vessels are exempt from emission control requirements if they are only used in emergencies, are emptied within 15 days of receiving fluids and are equipped with a liquid level gauge
- R307-506-4(5) For vessels requiring emissions control, monthly inspections are required on the closed vent system, openings, thief hatches and bypass devices. Defects shall be repaired within 15 days.
- R307-506-4(6) If the well site is modified, it must be re-evaluated for emissions according to R307-506-4(2)
- R307-506-4(7) Controls may be removed after one year of operation if the production is less than 8000 bbls or more crude oil, or 2000 bbls or more condensate on a rolling 12 month cycle, or if demonstration shows that that the combined uncontrolled emissions are less than 4 tons VOC on a rolling 12-month cycle
- R307-506-5 The following records must be kept for 3 years: records of vent system inspections; crude oil throughput; emissions calculations or actuals recorded, and any sampling data taken; emergency storage vessel usage

**DEHYDRATORS**

- R307-507-3 R307-507 applies to dehydrators located on well sites or centralized tank batteries, unless they have an AO
- R307-507-4(1) Sources having a dehydrator and emitting four tons VOC or more per year combined, shall recycle, use, recover or control emissions. If VOCs are sent to a control device, the device must be compliant with R307-508.
- R307-507-4(2) If controls are required, monthly inspections are required on the closed vent system, openings, thief hatches and bypass devices. Defects shall be repaired within 15 days.
- R307-507-4(3) If the well site is modified, it must be re-evaluated for emissions according to R307-507-4(1)
- R307-507-4(4) Controls may be removed after one year of operation if combined VOC emissions are less than 4 tons VOC on a rolling 12-month basis

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- R307-507-5(1) Emission calculations shall be kept for all periods of operation if a control device is not installed
- R307-507-5(2) Records of inspection required by R307-507-4(2) must be kept for 3 years

#### **VOC CONTROL DEVICES**

- R307-508-3(1) VOC control devices must have a control efficiency of 95% or greater, operate with no visible emissions and have an operational auto-igniter per R307-503
- R307-508-3(2) To demonstrate 95% control efficiency, use 40 CFR 60.5413
- R307-508-3(3) Monthly AVO inspections must be conducted on VOC control devices and associated equipment
- R307-508-4(1) Control device efficiency records must be kept as long as the VOC control equipment is on site
- R307-508-4(2) Manufacturer operating and maintenance instructions must be kept for the life of the VOC control equipment
- R307-508-4(3) AVO inspection records must be kept for 3 years for the VOC control equipment

#### **LDAR**

- R307-509-3 This LDAR rule applies to all fugitive emissions components at well sites unless the source has an AO, until the well is shut in. If the source is already meeting 40 CFR 60.5397a, then these requirements are met as well.
- R307-509-4(1)(a) An emissions monitoring plan is required (see rule for detail)
- R307-509-4(1)(b) The monitoring plan must address difficult-to-monitor and unsafe-to-monitor components
- R307-509-4(1)(d) Initial monitoring surveys must be within 60 days after startup for new sources, and by Jan 1, 2019 for sources existing prior to 1/1/2018. Subsequent surveys must be semi-annually (at least 4 months apart) for regular components, annually for difficult-to-monitor components, and as required by the monitoring plan for unsafe-to-monitor components.
- R307-509-4(1)(e) Monitoring surveys must be done with OGI equipment or according to Method 21
- R307-509-4(1)(f) Fugitive leaks must be repaired within 15 days unless infeasible, unsafe, etc., as stated in the rule, which would require repair within 24 months
- R307-509-4(1)(g) Resurvey of the repaired component must be done within 30 days
- R307-509-5(1) The emissions monitoring plan shall be kept for the life of the well site
- R307-509-5(2) Records of repairs shall be kept for 3 years

#### **ENGINE REQUIREMENTS**

- R307-510-3 This engine rule applies to natural gas engines at well sites and centralized tank batteries that do not have an AO, and began operations, installed new engines, or made modifications to existing engines after January 1, 2016
- R307-510-4(1) All engines subject to the rule must meet the following limits:  
>25hp and <100hp -- 4.85 g/hp-hr for CO and 2.83 g/hp-hr for HC+NOx  
>100hp -- 1.0 g/hp-hr for NOx, 2.0 g/hp-hr for CO and 0.7 g/hp-hr for VOC
- R307-510-4(2) The owner shall either purchase a certified ICE or conduct initial performance testing per 40 CFR 60.4244
- R307-510-4(3) Engine exhaust must vent vertically and unrestricted. For site horsepower ratings of 306 or greater, the stack height shall be 10 or more feet, and for site horse power ratings of 151 to 305 the stack height shall be 8 or more feet.
- R307-510-5 Engine certifications or initial performance tests shall be kept for the life of the engine at the source

***The following Subparts of 40 CFR Subchapter C may apply at oil and gas production sources. Additional subparts may apply. All exemptions are not listed in the statements below.***

40 CFR 60 **NSPS Subpart IIII** applies to owners and operators of stationary combustion ignition (CI) internal combustion engines (ICE) that commence construction after July 11, 2005, where the stationary CI ICE are manufactured on or after April 1, 2006.

40 CFR 60 **NSPS Subpart JJJJ** applies to owners and operators of stationary spark ignition (SI) internal combustion engines (ICE) that commence construction after June 12, 2006, where the stationary SI ICE are manufactured on or after July 1, 2008, for engines with a maximum engine power less than 500 hp.

40 CFR 60 **NSPS Subpart Kb** applies to each storage vessel with a capacity greater than or equal to 75 cubic meters (19,813 gallons or 471 bbl) that is used to store volatile organic liquids. NSPS Subpart Kb does not apply to storage vessels used for petroleum or condensate stored, processed, or treated prior to custody transfer. NSPS Subpart Kb also does not apply to the following storage vessels: those with capacities greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure less than 15.0 kPa, and those greater than or equal to 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure less than 3.5 kPa.

40 CFR 60 **NSPS Subpart KKK** applies to onshore natural gas processing plants that commence construction, reconstruction, or modification after January 20, 1984, and on or before August 23, 2011. Natural gas processing plant is defined as any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both.

40 CFR 60 **NSPS Subpart LLL** applies to sweetening units and sweetening units followed by sulfur recovery units that process natural gas which commenced construction or modification after January 20, 1984, and on or before August 23, 2011.

40 CFR 60 **NSPS Subpart OOOO** applies to the following onshore affected facilities that commenced construction, modification, or reconstruction after August 23, 2011 and on or before September 18, 2015: gas wells, centrifugal compressors, reciprocating compressors, pneumatic controllers, storage vessels, sweetening units, and hydraulically refractured wells.

**NOTE:** *Subpart OOOO does not apply to storage vessels at sites that have an AO, because the production limitations of the state-issued AO provide a legally and practically enforceable limit as described in 40 CFR 60.5365(e).*

40 CFR 60 **NSPS Subpart OOOOa** includes both VOC and GHG emission standards for the following onshore affected facilities that commence construction, modification, or reconstruction after September 18, 2015: wells, centrifugal compressors, reciprocating compressors, pneumatic controllers, storage vessels, sweetening units, pneumatic pumps, and collections of fugitive emissions components at a well site or compressor station.

**NOTE:** *Subpart OOOOa does not apply to storage vessels at sites that have an AO, because the production limitations of the state-issued AO provide a legally and practically enforceable limit as described in 40 CFR 60.5365a(e).*

40 CFR 63 **MACT Subpart CCCCCC** applies to owners and operators at gasoline dispensing facilities.

40 CFR 63 **MACT Subpart HH** applies to owners and operators of triethylene glycol (TEG) dehydration units.

***The following Subparts of 40 CFR Subchapter C may apply at oil and gas production sources. Additional subparts may apply. All exemptions are not listed in the statements below.***

40 CFR 63 **MACT Subpart HHH** applies to owners and operators of natural gas transmission and storage facilities that are major sources of HAP emissions.

40 CFR 63 **MACT Subpart ZZZZ** applies to owners and operators of stationary reciprocating internal combustion engines (RICE) at a major or area source of HAP emissions. A new or reconstructed stationary RICE located at an area source must meet the requirements of MACT Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart JJJJ.

**Title V Applicability:**

Title V of the 1990 Clean Air Act (Title V) applies to the following:

1. Any major source;
2. Any source subject to a standard, limitation, or other requirement under Section 111 of the Act, Standards of Performance for New Stationary Sources;
3. Any source subject to a standard or other requirement under Section 112 of the Act, Hazardous Air Pollutants; or
4. Any Title IV affected source.

Some NSPS and MACT Subparts exempt sources from the obligation to obtain a permit under 40 CFR part 70 (Title V permit) if the source is not otherwise required by law to obtain a permit.

Examples: NSPS Subpart JJJJ and MACT Subparts CCCCCC and ZZZZ